REMARKS

Claims 28-47 are currently pending in the application. Claims 34 and 35 have been amended and no new matter has been added by virtue of these amendments.

Oath/ Declaration

The Examiner alleges that "it does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56." (Office Action, p.2). The Examiner indicated that Applicants submit a new oath in accordance with 37 CFR 1.56.

Applicants submit that the filed oath fully meets the requirements of 37 CFR 1.56 and ask the Examiner to explain his position. Applicants have stated that they acknowledge their duty to disclose information material to the examination (i.e., the patentability) of the application. This fully complies with the requirements of 37 CFR 1.56. Accordingly, Applicants request that this request be withdrawn.

Rejection of Claims Under 35 U.S.C. §112

Claims 34 and 35 were rejected under 35 U.S.C. §112, second paragraph as being indefinite for "failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." (Office Action, p.3). Applicants respectfully traverse the rejection, but to further prosecution, have amended the claims to remover reference to an industry standard microtiter plate. Accordingly, Applications request withdrawal of the rejection and allowance of the claims

Rejection of Claims Under 35 U.S.C. §102

Claim 28 was rejected under 35 U.S.C. 102(e) as being anticipated by Kellog et al. (US 2002/0151078; the '078 reference herein). Applicants respectfully traverse the rejection.

Instant claim 28 teaches a system comprising a macroscale device which is interfaced with a microscale device at an interface using double-sided tape. The Examiner argues that the '078 reference teaches "a macroscale device which is interfaced with a microscale device at an interface using double-sided tape." (Office Action, p.3). The Examiner points our paragraph [0138] of the '078 reference. However, paragraph [0138] teaches that the interface between the two devices is based on physical forces, not an adhesive seal. The adhesive is used, rather, to cover the holes and channels in the microfluidic layer:

> Sealing film with adhesive exposed was first applied to the upper surface of the macrofluidic layer so that it completely covered the holes and channels 207, 208, 211, 218. Final assembly was completed by forming a reversible, conforming seal between the PDMS microfluidics layer and the bottom surface of the macrofluidic reservoir layer 201 made through simple physical contact of the two components. **This seal is based on physical adhesion forces alone**--van der Waals attraction forces and potentially static electrical charge present on the surfaces--and was sufficient to seal the disc against leakage due to the centripetally-induced pressures used.

Again, paragraph [0084] teaches that the film used in the '078 reference is used as a sealing film to enclose the channels, not to provide an interface between a microfluidic and microfluidic device.

> In FIG. 1, platform 100 is composed of at least 3 component layers. A reservoir layer 201 having features on the lower face, or both the upper and lower faces, is used. In cases where there are fluidic channels on the upper surface, a sealing film 301 is used to enclose those channels.

Accordingly, Applications request withdrawal of the rejection and allowance of the claims.

Rejection of Claims Under 35 U.S.C. §103

Claims 28 – 33 and 36 – 43 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over O'Connor et al. (US 6,536,477; the '477 reference herein). Applicants respectfully traverse the rejection.

Instant claim 28 was described above. Claim 29 recites a system comprising a macroscale device which is interfaced with a microscale device at an interface using transfer tape.

The Examiner argues that the '477 reference teaches "a macroscale device which is interfaced with a microscale device at an interface using double sided tape, and a macroscle device which is interfaced with a microscale device at an interface using transfer tape." (Office Action, p.4). The '477 reference fails to teach a system comprising **a macroscale device which is interfaced with a microscale device**. The '477 reference teaches microfluidic coupling devices and modular systems of microfluidic components (see e.g. col 1, lns. 61 – 66; col 3, lns. 11 - 14). The '477 reference teaches that **microfluidic devices can be interfaced with each other through adhesive**, for example:

> In a preferred embodiment, the bottom surface 28 of the microfluidic coupler near the inlet port 25 is **covered with an adhesive material that allows the inlet port to be connected to the outlet port of a microfluidic device**. Alternatively, the surface 28 can be non-adhesive and the surface of the microfluidic device to be coupled to can be adhesive. In an alternative embodiment, both surfaces are adhesive.

As such, the '477 reference teaches that microfluidic devices can be coupled **to other** microfluidic devices with adhesive material. The Examiner argues that the '477 reference teaches that "the pumping device is considered a macroscale device." (Office Action, p.4). However, there is no teaching or suggestion in the '477 reference that the pumping mechanisms are interfaced with a microscale device at an interface using any adhesive.

For the reasons set forth above, the '477 reference do not render the current claims obvious. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

Claims 34 and 35 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over O'Connor et al. (US 6,536,477; the '477 reference) in view of Pfost (US 5,104,621; the '621 reference herein). Applicants respectfully traverse the rejection.

Instant claim 34 depends from claims 28 and 29 described above, and recites that the microchannels connect to reservoirs in the microfluidic device and where the center-to-center distance of each reservoir corresponds to the center-to-center distance of the wells in the industry-standard microtiter plate.

For the reasons set forth above, the '477 reference in combination does not render the current claims obvious. The addition of the '621 reference does not cure the defects of the '477 reference.

Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

Claims 44 and 45 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over O'Connor et al. (US 6,536,477; the '477 reference) in view of Crandall et al. (US 6,352,766; the '766 reference herein). Applicants respectfully traverse the rejection.

Instant claim 44 depends from claims 28 and 29 described above, and recites that at least one adhesive side of the tape surface is covered by a release liner prior to adhering the device surface of the macroscale or microscale device.

For the reasons set forth above, the '477 reference in combination does not render the current claims obvious. The addition of the '766 reference does not cure the defects of the '477 reference.

Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

Claims 46 and 47 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over O'Connor et al. (US 6,536,477; the '477 reference) in view of DiZio et al. (US 6,455,152; the '152 reference herein). Applicants respectfully traverse the rejection.

Instant claim 46 depends from claims 28 and 29 described above, and recites that the adhesive on the tape is patterned onto a backing. Instant claim 47 depends from claims 28 and 29 described above and recites that at least one surface of the tape comprises portions that are coated with adhesive and portions that are not coated with adhesive.

For the reasons set forth above, the '477 reference does not render the current claims obvious. The addition of the '152 reference does not cure the defects of the '477 reference.

Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

If the Examiner believes that a telephone conversation with Applicant's attorney/agent would expedite prosecution of this application, the Examiner is cordially invited to call the undersigned attorney of record. The Director is hereby authorized to charge any credits or deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105, under Order No. 58282 (47137).

Respectfully submitted,

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